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# A legal tool for participatory methods in land systems science: the Thai model of Health Impact Assessment and the consideration of zoonotic diseases concerns into policies



## Abstract

The need to integrate insights from both natural and social sciences, to deal with complex interactions from the global to the local level has been affirmed in different arenas from the Millenium Ecosystem Assessment (2005) to the IPBES (2013). The need for integrative studies seems particularly relevant when it comes to understand the numerous and intertwined relationships between health and the environment.

The insights of the local communities for daily local observations or to point sudden changes can be precious both for scientists and policy-makers. In Southeast Asia, hotspot of biodiversity and of emerging infectious diseases, policies having an impact on the environment could have unpredicted effects on the dynamic of zoonotic diseases. Community Health Impact Assessment in Thailand and participatory approaches appear appropriate tools for the elaboration of policies considering the indirect effects on zoonotic diseases.

## Introduction

The necessity to integrate insights from both natural and social sciences, to deal with complex interactions from the global to the local level has been affirmed in different arenas from the Millenium Ecosystem Assessment (2005) to the IPBES (2013). The need for integrative studies seems particularly relevant when it comes to understand the numerous and intertwined relationships between health and the environment and their impact on human wellbeing (Chivian 2005; Walpole et al. 2009) and thus the One Health Initiative emphasised the integration of animal, human and environmental health for the mutual benefit of all (Klement et al. 2009).

Such studies are fundamental not only for the co-production of knowledge between different disciplines but also to help policy-makers to adopt appropriate policies that take into account

the possible side-effects or different trade-offs resulting from policies and regulations in distinct sectors such as land conservation and forest protection and agriculture for instance.

The insights of the local communities for daily local observations or to point sudden changes can be precious both for scientists and policy-makers. In Southeast Asia, considered as a hotspot of biodiversity as well as a hotspot for emerging infectious diseases, policies having an impact on the environment could have unpredicted effects on the dynamic of zoonotic diseases and among them, on rodent-borne diseases, rodents being hosts of many zoonotic parasites and pathogens (Meerburg et al. 2009).

On that respect, the procedure of Community Health Impact Assessment (HIA) in Thailand could serve as a model articulating participatory methods with science and policy to improve knowledge and foster its implementation through co-designed and evidence-informed policies (Lajaunie, 2014).

In the perspective of the ASEAN (Association of Southeast Asian States) Economic Community to be built by the end of 2015, it became necessary to prevent transboundary health impacts by integrating surveillance and alert systems. ASEAN member states charged Thailand to develop the framework of HIA in ASEAN and to foster its implementation. Thailand's leadership resides in the fact that the country acknowledged a constitutional value to HIA and proposed to institutionalise HIA at the regional level.

The Chiang Mai Declaration, outcome of the first Asia Pacific HIA conference, held in Thailand, affirms that HIA is "one of the critical tools for developing healthy public policies that intend to provide an enabling social and physical environment that promotes having a healthy life and offers policy options people can access" (Chiang Mai Declaration, 2008).

We will examine the procedure of community health impact assessment in Thailand and how it has been applied and then we will illustrate the

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interest of such participatory procedures for the elaboration of policies with the example of risks related to zoonotic diseases.

## Community HIA in Thailand

The Thai Constitution of 2007 gave a constitutional basis to HIA acknowledging it in the part of the Constitution dedicated to Community rights and thus HIA is binding on all institutional organs.

If the Constitution details different types of HIA, the Community HIA is remarkable as it empowers communities: communities can conduct HIAs and use information in order to share, discuss and negotiate during public policy making processes which can lead to the most beneficial development for community's well-being.

The Community HIA is considered as a joint learning process in the society. The local communities are conducting the HIA by themselves, they gather data and take an active part into the development of public policies that might affect them and at the end they support a decision-making in favour of the health of people. The process can be launched by "any people, community, local administrative organisation, non-government organization or academic institute" (National Health Commission Office, 2010).

Numerous Community HIAs have been conducted. An example is the HIA carried out in orange plantations in Northern Thailand which purpose was to contribute to the definition of a Healthy Public Policy in the Agricultural Sector. The HIA responded to a participatory learning process for local people having as objectives: to investigate socioeconomic and population changes due to the introduction of orange plantations as commercial crops, to explore local people's health problems related to the orange crops, to identify the scope of HIA of the orange plantations in the three districts concerned.

Different methods were used such as questionnaires, local community health monitoring, local health forums to share experiences and issues (blood tests to check pesticides levels were proposed).

The HIA underlined the great importance of the learning process as the local community learnt how to comprehend a holistic approach of health (Sabrum, 2008). Local people participated in the design of the study method, and in the data investigation, collection and processing.

We can underline that it was a real participatory study: it appeared that the issues related to the deterioration of the watershed ecosystem were until then ignored. They found the evidences of the link between the health impacts and the orange plantations while no key stakeholders (academics, plantations owners or health officers) accepted to join the study.

This example shows how Community HIA through the active involvement of citizens can be helpful to take into consideration the various dimensions of health and to detect unsuspected effects of policy on communities' life.

## Participatory studies on rodent-borne diseases and communities assessments

Rodents are particularly appropriate biological models to investigate the relation between humans and their environment, while assessing health through rodent-borne diseases. On a research project aiming to understand the consequences of environmental changes on the evolution of communities of rodents, their parasites and their pathogens in South-East Asia (CERoPath project), interviews about knowledge and perception regarding rodents have been conducted in several villages of Thailand and Northern Lao PDR where rodent trappings have been organised.

Those in-depth interviews were organized to collect information on several domains such as identification of rodents, rodents and other wildlife hunting, consumption of rodents, diseases of rodents, rodent-borne diseases outbreaks, and rodents within the house or in the fields. In each village, the chief of the village was interviewed, and the information obtained from him was confronted with those from other persons, mostly hunters.

Answers regarding the various domains have been gathered in order to get contextualised data on the study area and on the population, to define research questions and to detect new potential risk factors for rodent-borne infection.

The interviews also aimed at determining information that could have an implication for conservation or diseases risks and then at developing questionnaires for a quantitative approach. They could also contribute to assess the impacts of public health policies or prevention campaigns in helping to determine the evolution of risks perception whether it is related to zoonotic diseases or other kind of risks (Della Rossa, 2013).

As we have seen, in Thailand the Community HIA can be launched by any academic institute and such interviews reveal the need to conduct HIAs integrating the concern of zoonotic diseases into the assessment of policies having indirect impact on the emergence or spread of those diseases.

HIA has been defined as a "multidisciplinary process within which a range of evidence about the health effects of a proposal is considered in a structured framework. It takes into account the opinions and expectations of those who may be affected by a

proposed policy. Potential health impacts of a proposal are analysed and used to influence the decision-making process » (Lock, 2000).

Scientists working on zoonotic diseases with a holistic approach in ASEAN countries could seize the opportunity to include their concerns into the Community HIA legal framework, using its different phases (screening, scoping, appraisal, reporting, monitoring).

The interest of using HIA resides in the fact that the identification of issues linked with policies will command the intervention of decision-makers to solve those issues as HIA is legally binding and at the same time it will allow the citizens to be involved into the decision-making process. It would then respond to the need of evidence-based policies regarding emerging diseases (WHO SEARO/WPRO, 2005).

HIA in Thailand is not originally focusing on zoonotic diseases. Nevertheless, in the context of zoonotic diseases, integrating this health concern into HIA seems relevant and as the drivers and the

transmission dynamic of zoonotic diseases need a better understanding (Cosson et al., 2014), the cooperation of scientists and decision-makers from different sectors and disciplines could help to design innovative strategies (Jancloes et al., 2014).

The community HIA is an example of co-production of knowledge between the local community, scientists and policy-makers: it appears to be a real learning process able to lead to the change of unsustainable practices through the understanding of health issues resulting from policies (agriculture, water management, forest conservation...) and the collective attempt to find solutions. The originality of such a procedure is to establish a dialogue between citizens and decision-makers as well as to improve the interaction between science and policy.

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**Figure 1:** Fragmented forest in the study area





**Figure 2:** Speakers used by the village chief to alert the inhabitants, including in case of disease risks

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